



## **Economic Impact Analysis Virginia Department of Planning and Budget**

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### **9 VAC 20-80 – Virginia Waste Management Board Virginia Solid Waste Management Regulations June 17, 2002**

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The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 9-6.14:7.1.G of the Administrative Process Act and Executive Order Number 25 (98). Section 9-6.14:7.1.G requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. The analysis presented below represents DPB's best estimate of these economic impacts.

### **Summary of the Proposed Regulation**

The proposed changes will 1) require the director of Department of Environmental Quality (the department) to make a needs determination for additional solid waste disposal capacity, 2) require additional documentation from landfill operators for permit applications, 3) require operators to guarantee disposal capacity to localities, 4) require a host community agreement between the locality and the operator, 5) require solicitation of comments from geographically contiguous jurisdictions, 6) establish minimum numerical inspection frequencies, 7) modify the way the department responds to citizen complaints, 8) require implementation of a remedy within a specific period if methane gas release is discovered, and 9) add a schedule for evaluation of presumptive remedy for violation of groundwater protection standards.

### **Estimated Economic Impact**

These regulations apply to solid waste management facilities, which comprise landfills, transfer stations, incinerators, recycling and composting facilities. Due to activities such as

waste disposal, treatment, and storage, solid waste management facilities have the potential to pose risks to human health and the environment and consequently are subject to regulations. The proposed amendments include several changes to meet the statutory requirements enacted by General Assembly and several other non-statutory changes. These changes are discussed below.

## Statutory Changes

The Waste Management Board proposes a number of changes to meet the statutory requirements enacted since these regulations were last amended on May 23, 2001. One of the requirements in section 10.1-1408.1.D.1 of the Code of Virginia requires the director of Department of Environmental Quality (the director) to determine whether *there is need for additional capacity* prior to issuing a permit for a new solid waste management facility or an amendment allowing a facility expansion or an increase in capacity. The director is also required to determine whether the additional capacity is consistent with local solid waste management plans. Currently, localities make determinations regarding the need for a landfill and submit plans to the department for a technical review. With the proposed changes, a state level needs determination will also be performed. For the director to make a state level needs determination, additional information or documentation will be required from operators of new or expanding waste management facilities. In addition, to satisfy other statutory requirements,<sup>1</sup> landfill operators will be required to submit additional documentation for permit approval, to provide reserved disposal capacity to localities, to make an agreement with the host locality, and to solicit comments from other jurisdictions.

**Needs determination.** The proposed regulations will provide two options for solid waste management facility operators to submit information for the director to consider when determining if there is a need for the additional capacity. Under the first option, facility operators will be required to gather and submit a significant amount of readily available information for director to make needs determination. Required information covers the anticipated area to be served by the facility, other facilities in the area and their capacity and service lives, the quantity of waste generated in the service area, waste disposal needs specified in the local plan, projected waste generation in the service area, alternate waste management

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<sup>1</sup> Other related sections of the Code of Virginia are §10.1-1408.1.B.6, §10.1-1408.1.B.7, §10.1-1408.1.B.8, and §10.1-1408.1.P.

activities in the service area such as recycling or composting, disposal capacity that will be added by the proposed facility, capacity needs of other related localities, and any other factors that may justify additional capacity.

The second option relates more clearly to landfills although it applies to all solid waste management facilities and also includes capacity requirements. Under the second option, existing facilities must have less than 10 years of remaining capacity, which will be estimated from current or projected disposal rates. If the applicant is eligible for a permit under this option, either local or state level available permitted disposal capacity must be less than 20 years for approval to construct and operate a landfill. Local disposal capacity will be determined based on the capacity available within the planning region immediately contiguous to the host community or the capacity available within a 75 miles radius of the proposed facility. Once the capacity information is received, the director will consider the information and make a determination. Regardless of the capacity information submitted, the director will reserve the right to issue or deny a permit.

It is expected that most of the need determinations will be done under the second option for two reasons. First, the needs determination through the second option is expected to be less costly than seeking approval under the first option. The information on remaining capacity at the facility and on the available capacity at the local or state level will be readily available and is not expected to introduce significant costs. Also, the information operators are required to gather and submit is less than the information required under the first option. Second, the eligibility requirement for application and the requirements for approval seem to be sufficient to accommodate most landfill operators. For example, the operator will be able to apply if there is less than 10 years of remaining capacity at the facility. The department indicates that on average it takes about five years to obtain a permit and to bring a landfill online. Similarly, industry representatives indicate ten years of remaining capacity should be sufficient to allow normal business operations during the permit application process and to build additional capacity. Thus, the ten-year available capacity will likely be sufficient to allow enough time for the operators to obtain additional capacity without significantly disrupting normal business operations. Furthermore, the requirement that there must be less than 20-year available capacity at the state or local level is not expected to be a limiting factor to seek approval under the second option because according to a 1999 study conducted by the department, less than 20 years of statewide

landfill capacity was then available and as more capacity is exhausted new permits for used capacity can be issued. Preliminary information from the department's 2001 waste assessment also indicates that currently less than 20 years of capacity is available in the Commonwealth.

If the approval from the director cannot be obtained under the second option, solid waste facility operators will likely seek approval under the first option which requires submission of significant amount of relevant information to make needs determination. According to the department, it may cost from \$5,000 to \$10,000 to collect the required information and submit the application for needs determination. Although about 8 to 11 applications are expected for needs determination annually, it is not known how many will seek approval under the first option and will incur the estimated costs.

The proposed needs determination may introduce a new uncertainty component for operators of solid waste management facilities. The director will evaluate the submitted documentation to make needs determination at his discretion and may not approve the applications for additional capacity in some cases. Thus, how the director will use his discretion will be an important factor for the facility operators. If the uncertainty is significant, the operator's ability to conduct normal business operations may be undermined and the costs may increase. Available capacity is a significant element for being able to make new contractual agreements, to meet existing obligations, and to finance a new facility. However, since the proposed regulations are designed to prevent excess capacity and the operators are unlikely to construct new facilities or expand existing facilities if there is no need, in most cases the uncertainty is expected to be minimal to cause any significant disruption of normal business operations. The main benefits of the proposed changes appear to be making sure that excess solid waste disposal capacity is not built in the Commonwealth and establishing a needs determination method with significant flexibility for the director to satisfy the statutory mandate. However, there is no data available to determine the size of these expected benefits.

**Additional documentation.** The proposed regulations will require some additional documentation to be used in permit approval determination. The director makes a determination of site suitability for the construction and operation of a proposed sanitary landfill. In addition to the currently required documentation, the proposed changes will require the applicant to submit a Virginia Department of Transportation (VDOT) adequacy report, a landfill impact statement,

demonstration of consistency with the local solid waste management plan, and demonstration of public interest. The required VDOT report is the same as the one required under host community agreement and associated costs are discussed under that section.

The required landfill impact statement must address potential impact of the facility on parks, recreational areas, wildlife management areas, critical habitat areas of endangered species, public water supplies, marine resources, wetlands, historic sites, fish and wildlife, water quality, and tourism. Expected costs to prepare a landfill impact statement are about \$9,800 for the landfill operators and about \$2,040 for the department in terms of the staff time to review the application.<sup>2</sup> The department expects about nine landfills to be subject to this requirement annually. Thus, the total costs of the proposed additional documentation requirement are expected to be \$88,000 for the landfill operators and \$22,400 for the department annually.

In exchange for these costs, the department will be able to determine potential impact on natural resources in proximity of the proposed landfill and consequently require a solution to potential problems beforehand or require an alternate construction site.

The other documentation that will be required includes a demonstration that the proposed facility is consistent with the local solid waste management plan. This information will address the role of the facility in local solid waste management plan, additional solid waste disposal capacity that will be provided, and the specific references to related parts of the local solid waste management plan. Another set of the documentation will provide information demonstrating that the public interest will be served by the proposed new or expanding facility. This information will address cost comparisons among waste transfer or other disposal options, if the protection of human health, safety, and the environment will be increased, if alternative disposal practices including reuse and reclamation will be provided, if increased recycling opportunities will be allowed, if the quantity of solid waste will be reduced by energy recovery and/or subsequent use of solid waste, if the facility is capable of supporting the needs of the host community, and any other factors that may be pertinent to public interest.

The cost of preparing this documentation is expected to be about \$1,500 per site for the applicant.<sup>3</sup> The department's review costs are expected to be about \$250 per application, which

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<sup>2</sup> Source: The Department of Environmental Quality

<sup>3</sup> Ibid.

is based on five hours of staff time at \$50 per hour. According to the department, about 11 permits are issued annually that will be subject to these requirements. Thus, the total costs of the proposed documentation requirements are expected to be \$16,500 for the waste facility operators and \$2,750 for the department annually.

The benefit is that the department will use this documentation to determine if the facility is consistent with safe long-term solid waste disposal practices.

**Disposal capacity guarantee.** The operators of new or expanding sanitary landfills will be required to guarantee that sufficient disposal capacity will be available in the facility for the localities to comply with their waste management plans. This requirement will ensure that localities can contract for disposal space at new or expanding municipal solid waste landfills. Thus, localities will be given a valuable priority in using the disposal capacity available.

The reserved capacity to fulfill this commitment may divert landfill operators from using the available capacity for its best use and create economic inefficiencies. The landfill operators are likely to absorb the cost of these inefficiencies because they are the ones who may have to forgo more profitable use of the reserved disposal capacity. In this sense, this requirement is likely to transfer some economic value from landfill operators to the localities.

**Host Community Agreement.** The proposed changes will also require submission to the department of an agreement between the private sanitary landfill applicant and the host government or authority. The contents of the host community agreement must include the amount of financial compensation to the host community, daily travel routes and traffic volumes, daily disposal limit, and the anticipated service area of the facility. The purpose of these requirements is to make sure that the locality is aware of certain considerations and takes them into account in their decisions. The department indicates that in most cases private sanitary landfill operators already have agreements with the local governments. Since these elements are typically provided in host agreements, no significant additional costs to private landfill operators are expected.

However, the host community agreement must contain a provision indicating that new private facilities pay the full cost of at least one employee of the host locality who will monitor and inspect waste disposal practices in the locality. Additionally, the sanitary landfill applicant

will be required to split air and water samples and to provide them to the locality upon request for independent testing purposes and to pay all associated testing costs.

These requirements are likely to introduce new costs to the private sanitary landfill operators expanding or coming online. According to the department, annual compensation to an employee who will be in charge of monitoring and inspecting waste disposal practices is about \$100,000.<sup>4</sup> The costs associated with independent testing of air and water samples will depend on the number of gas and groundwater wells on site, the monitoring requirements associated with wetlands, and the number of times the splitting of samples is requested. The department expects additional analysis costs associated with splitting samples to vary between \$50,000 and \$140,000 per year for a sanitary landfill operator. The total additional costs associated with these requirements will depend on the number of private sanitary landfills coming online. On average, less than one new or expanding private facility is expected to seek approval from the department annually. Thus, the total additional costs to private sanitary landfill operators are likely to be less than the \$150,000 to \$240,000 range per year.

On the other hand, these requirements are likely to increase compliance with applicable waste disposal rules and air and water quality standards by increasing monitoring and inspection through the operator funded employee position and by independent testing through splitting samples.

Similar to the private facilities, publicly owned and operated sanitary landfills will be required to provide the information on daily travel routes and traffic volumes, daily disposal limit, and the anticipated service area of the new or expanding facility. Currently, publicly owned facilities do not produce this information. The costs associated with a traffic study to determine volume of traffic is estimated to be between \$20,000 and \$50,000.<sup>5</sup> The costs of providing documentation on travel volume, travel routes, daily disposal limit, and the anticipated service area are expected to be about \$1,000 to \$2,000. Additionally, expected cost to the department is about \$250 to review an application which is estimated based on five hours of staff time at \$51 per hour. The department expects to receive about eight new or expanded public sanitary landfill applications per year. Thus, the total costs of these requirements are expected to

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<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

be about \$168,000 to \$416,000 to the publicly owned and operated sanitary landfills and about \$2,000 for the department review.

The required documentation may provide a means to identify potential problems such as traffic congestion before the construction is executed and potentially help find a more suitable location for the facility. Such required studies may improve the flow of traffic and provide cost savings in terms of time, fuel, and vehicle depreciation due to running idle or having to take longer alternate routes.

**Solicitation of comments from other jurisdictions.** All landfill operators, privately or publicly operated, will be required to solicit comments from geographically contiguous localities. They will be required to notify other jurisdictions about the nature and location of the facility and date and location of the public hearing.

This requirement is likely to introduce additional costs to landfill operators associated with the method of notification, arranging public hearings, and postponing the construction to seek comments. On the other hand, solicitation of comments will provide adjacent localities a chance to communicate their concerns, which may not be apparent to the operator and potentially solve these problems before construction takes place.

## **Non-statutory Requirements**

The proposed regulations contain several non-statutory requirements. These proposed changes are discussed below.

**Inspection frequency.** The proposed regulations will establish minimum inspection requirements for detection of unauthorized waste received by landfills, incinerators, and energy recovery facilities.<sup>6</sup> The minimum inspection requirement for all facilities will be 1% of the solid waste received. Facilities receiving waste from other states with less stringent requirements than Virginia will be subject to more frequent inspection requirements. These facilities will be required to inspect at least 10% of the waste they receive from other states. In order to make a determination if the regulatory structure of a state is more or less stringent, the facilities will be required to submit information on the regulation of waste for each state from which they receive waste.

Currently, there are only general inspection requirements to control disposal of unauthorized waste incoming to the landfills and incinerators. These requirements do not specify a minimum inspection level. The department does not know if the current inspections are conducted at a higher or lower inspection level than what is proposed. Some facilities believed to have higher inspection rates while some others believed to have lower inspection rates. Facilities that do not do inspections at the proposed level will likely incur additional costs. They are likely to devote additional labor to conduct the inspections, or experience a slowdown in solid waste processing at the facility if they allocate their current staff for inspections. The likely effect on the facilities that currently have higher inspection rates is not known. On one hand, they may choose to continue to conduct inspections at their current rate; on the other hand, they may reduce their inspection rate. Facilities that reduce their inspection rates will likely incur savings in labor costs or improve their waste processing speed.

The department believes that the regulatory requirements regarding what types of wastes can be disposed of at a municipal solid waste facility are more stringent in Virginia than those found in District of Columbia, New York, Maryland and some other states. These differences may result in higher health and safety risks in Virginia originating from out-of-state waste. The proposed minimum inspection rate has the potential to reduce unauthorized waste processed at landfills and incinerators. In states with less stringent rules, operators may be disposing of types of wastes that are not allowed in waste disposal facilities in Virginia. These wastes may be present with other types of waste and may be arriving to Virginia waste disposal facilities. Increased inspections may help reduce potential health and environmental risks that may originate from medical wastes, PCB wastes, and wastes from conditionally exempt small quantity generators. In addition, establishment of a quantitative standard may increase the enforceability of the inspection requirements. However, the size of these benefits cannot be determined at this time.

**Other changes.** The proposed rules will change the way the department responds to citizen complaints it receives about solid waste matters within the board's purview. Currently, the department provides written responses to all complaints. According to the department, compliance with this requirement is burdensome because of the complaints expressed by the

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<sup>6</sup> Unauthorized waste includes regulated medical waste, hazardous waste from conditionally exempt small quantity

phone and other types of communications. The proposed changes will require the department to respond in writing to citizen complaints only if the complaint is written and signed. However, the proposed language will continue to require investigation of all citizen complaints regardless of the format, as it is currently done. Since citizens can secure a response by a written and signed letter, there does not seem to be a decrease in the ability of citizens to access information. The department, on the other hand, will likely to experience costs savings in staff time and postal expenses to respond to comments that are not written and signed.

Also, the proposed changes will require implementation of a methane gas remediation plan within 60 days of detection. Currently, development of such a plan is required within 60 days following discovery of methane gas release and the department approves the plan for its implementation after that. The department indicates that 60 days implementation requirement is consistent with the federal regulations. This requirement will likely remedy a methane problem more quickly in the event high gas levels are detected at a facility. This may reduce costs from potential explosion or may reduce potential injury to workers from breathing gas. The quicker the problem is remedied, lower the chances of potential harm to workers or property. There may be also a reduction in likelihood of harm to neighboring property and residents and businesses. However, in some cases, the landfill operator may have difficulty implementing the remedy within the proposed time frame and may have to incur some additional costs to speed up the plan.

Finally, the proposed regulations will add a schedule for evaluating the impact of a presumptive remedy when taking a corrective action to address the groundwater protection standard violations. The presumptive remedies are methods that are known to be effective in helping to prevent additional groundwater contamination. A presumptive remedy can be implemented by notifying the department as opposed obtaining a prior approval. Other types of remedies require approval by the department and take time to evaluate and implement. Currently, there is a requirement for a schedule for implementing the presumptive remedy, but no requirement for a schedule for determining if the remedy is working. The proposed rule will require the landfill operators to evaluate the remedy every three years following its implementation. There has been no corrective action required by the department to date. Thus,

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generators, and chemical waste known as polychlorinated biphenyl (PCB).

this change is not likely to have any immediate impact on the landfill operators. However, it has the potential to introduce analysis costs on the landfill operators to evaluate the remedy, but also has the potential to determine if the remedy is working and if the remediation has been effective, or additional remedial actions are necessary.

### **Businesses and Entities Affected**

Based on the current permit application rates, about 8 to 11 waste management facilities may be affected annually. Of these, up to nine may be landfills and up to three may be other types of waste facilities.

### **Localities Particularly Affected**

The proposed regulations apply throughout the Commonwealth.

### **Projected Impact on Employment**

The proposed regulation will require additional documentation from landfill operators, which is expected to increase business volume of consultants in this industry. Consultants' demand for labor may increase. Also, changes related to the inspection frequency may increase or decrease the labor demand depending on the current inspection rates. Finally, need for additional staff at the department to execute proposed responsibilities will likely increase. In fact, 19 positions were added to the department during the 1999 legislative session partly because to implement the legislative changes, increase inspection, and to enforce the regulations. Thus, additional responsibilities are likely to be absorbed by the staff at the department.

### **Effects on the Use and Value of Private Property**

The proposed requirements for documentation and analysis from landfill operators are likely to create additional business for consultants in this industry and may increase their profitability. Thus, the value of consulting business in solid waste disposal industry may increase. On the other hand, the profitability of waste management facilities may decrease by a small margin and this may lead to a decrease in their value.